

REMARKS

Claims 1, 60-73 and 79-91 are pending in the application. Claims 1, 60, 61, 72, 73, 79 and 80 are amended. Claims 2-59 and 74-78 are cancelled, without prejudice.

Interview

The Examiner's courtesy in granting the telephone interview conducted March 9, 2004 is gratefully acknowledged. During the interview the section 112(1) rejections and the cited Pease and Wagner references were discussed. It is believed that agreement was reached on amendments to the claims to resolve the section 112(1) and 102(b) rejections. With regard to the remaining rejections, under section 103, in order to simplify the remaining issues for After Final prosecution the discussion was focused on a particular embodiment of the invention, recited in claims 59 and 78, wherein an aluminum substrate surface coated with a particular thickness of silicon dioxide selected for its optical properties to amplify the fluorescent signal used to read the claimed arrays is used. It was agreed that the Applicant would submit a written response including amendments to the claims to address the issues discussed for consideration by the Examiner.

Drawings

The acceptance of the drawings submitted with the previous response is acknowledged.

Claim Objections

Claim 72 has been amended to correct its dependency as suggested by the Examiner. Accordingly, it is respectfully submitted that the objection to this claim is now moot, and its withdrawal is respectfully requested.

Claim Rejections under §112

Claims 60-68 and 79-87 were rejected under 35 USC 112, first paragraph. The claims have been amended in order to use language consistent with the specification. Based on the discussion of this issue in the March 9, 2004 interview, it is believed that this amendment is acceptable to address the Examiner's concerns. This amendment does not alter that which is intended to be claimed, and it is believed that the claim scope is not changed by this amendment.

Claim Rejection under §102

Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by US Patent No. 5,831,070 to Pease et al. ("Pease"). As discussed in the March 9, 2004 interview, Pease does not

disclose that which is intended to be claimed in claim 1. Claim 1 recites, in relevant part, a substrate surface comprising a non-native oxide coated metal, that is, a substrate surface comprising metal coated with an oxide other than a native oxide (an oxide of that metal). Instead, Pease at col. 12, lines 2-3 discloses the possibility of using a silicon dioxide itself as a substrate. Silicon is a metalloid rather than a metal and the disclosure of the use of a native oxide of silicon, silicon dioxide, as a substrate does not anticipate a metal coated with an oxide other than an oxide of the metal. Notwithstanding this, claim 1 has been amended as discussed below with regard to the rejections under section 103, to recite silicon dioxide coated aluminum substrate surface. Thus, it is respectfully submitted that Pease does not anticipate claim 1, particularly in its amended form, and withdrawal of the rejection under section 102 is respectfully requested.

Claim Rejections under §103

Claims 1, 55-64, 66, 73-83 and 85 were rejected under 35 U.S.C. §103(a) as being unpatentable over US Patent No. 6,406,921 to Wagner et al. ("Wagner") in view of Pease. Claims 65, 67-72, 84 and 86-90 were rejected under 35 U.S.C. §103(a) as being unpatentable over Wagner in view of Pease, and further in view of US Patent No. 5,482,867 to Barrett et al. ("Barrett").

As discussed with Examiner Tran in the interview of March 9, 2004, in order to simply the remaining issues for After Final prosecution, Applicants propose to focus on a particular embodiment of the invention recited in claims 59 and 78. These claims recite an embodiment of the invention wherein an aluminum on glass substrate surface is coated with a particular thickness, i.e., 200 to 900 Angstroms, of silicon dioxide. As noted in the specification, for example at page 21, line 13 to page 22, line 15, the present inventors have discovered that the presence of a silicon dioxide coating of an appropriate thickness, e.g., 200 to 900 Angstroms, on the aluminum substrate surface can amplify the fluorescent signal used to read the arrays with resultant improvement in performance of the arrays in practice. It is respectfully submitted that this feature of this embodiment, recited in claims 59 and 78, is neither taught nor suggested by Wagner, either alone or in combination with the other cited art. Wagner discloses a long list of possible substrates and coatings as supports for its arrays, but does not address the issue of enhancing detection of the fluorescent signal used to read the arrays, and does not disclose or suggest the particular advantageous combination of aluminum and silicon dioxide of appropriate thickness, as claimed. The Pease reference has been discussed above and does not remedy the deficiencies of Wagner with regard to the present claims. Also, Barrett provides no relevant disclosure to remedy the deficiencies of Wagner and Pease with regard to the present claims.

The claims of the present application have been amended to recite claims 59 and 78 in independent form, by incorporating their limitations, and those of any intervening claims, into

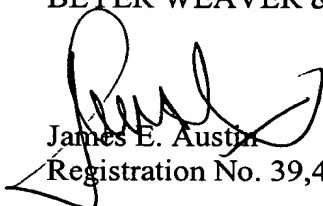
their respective independent claims, 1 and 73. Thus no new subject matter is claimed by these amendments. The remaining claims have been cancelled or amended to adjust dependencies accordingly. These amendments are made without prejudice to further prosecution of the subject matter of any cancelled claim in this or a subsequently filed continuation or divisional application.

For at least these reasons, it is respectfully submitted that claim 1, and corresponding kit claim 73, of the present application (previously presented claims 59 and 78 amended to independent form) are novel and patentable over the cited references. The remaining pending claims depend, directly or indirectly, from claim 1 or 73 and are thus submitted to be patentable for at least the same reasons. Thus, withdrawal of the rejections under 35 U.S.C. §103(a) is respectfully requested.

Conclusion

Applicants believe that all pending claims are allowable and respectfully request a Notice of Allowance for this application from the Examiner. Should the Examiner believe that a telephone conference would expedite the prosecution of this application, the undersigned can be reached at the telephone number set out below. If any additional fees are due in connection with the filing of this amendment, the Commissioner is authorized to charge such fees to Deposit Account 500388 (Order No. CHIRP014).

Respectfully submitted,
BEYER WEAVER & THOMAS, LLP


James E. Austin
Registration No. 39,489

P.O. Box 778
Berkeley, CA 94704-0778
Tel: (510) 843-6200